

CLIM

INSTALLATION, USE AND MAINTENANCE
MANUAL | Release 2.14 | 12-05-2017



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CLIMATIZZATO

Present publication:

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This document contains information that are strictly confidential, related to the patent deposited and owned 50% by GANDINI S.R.L. & 50% by WHITEAM S.R.L., under the registration number B5603ITWO and registered in 148 Countries with effective date May 24th 2016. The confidential information contained in this document, are addressed only to the customers that bought at least one Air Conditioned Umbrella of the CLIMO range.

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Patent Information:



Patent Pending deposited in 148 Countries by GANDINI S.R.L. and WHITEAM S.R.L. under the registration number B5603ITWO with effective date May 24th 2016.



Dear Customer,

We would first of all like to thank you for having chosen one of our products of the range CLIMO and we are sure you will enjoy in using it.

CLIMO is the Air Conditioned Umbrella, 100% made in Italy: a unique product that we though, developed, engineered, designed, tested and produced in Italy, with over 20 years of experience in Air Conditioning Business and in one of the most famous Countries, all over the world, recognized for: high end air conditioning appliances producers, excellent life style ambassadors, long lasting artistic value, worldwide famous designers and innovators.

We invented and developed CLIMO in order to bring the touch of comfort of air conditioning, in all outdoor open spaces, in order to increase business and customer satisfaction of Private villas, Golf Circles, Yacht Clubs, Holyday Villages, Vacation houses, Lounge bars, Restaurants, Wellness Centers, Fashion places, SPA, Beaches, Swimming pools, Exhibitions and in general all 1st Class Leisure and Wellness structures.

Present manual will help you in getting the best results from the installation, use and maintenance of your CLIMO.

Enjoy in reading this manual.


Enjoy in using CLIMO !

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Marketing & Sales

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Design & Production

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INDEX

- INTRODUCTION TO PRESENT MANUAL
- INTRODUCTION TO CLIM 
- COMPLIANCE
- PRELIMINARY SAFETY CONSIDERATIONS
- GENERAL WARNINGS
- WARRANTY LIMITATIONS
- GENERAL TECHNICAL DATA
- UNIT OVERALL DIMENSIONS
- INSTALLATION PLACE IDENTIFICATION
- INSTALLATION SAFETY CONSIDERATIONS
- INSTALLATION PROCEDURE
- ELECTRIC CONNECTIONS
- TRAP CONDENSATE DRAIN CONNECTIONS
- START-UP PROCEDURE
- OPERATING SEQUENCE
- SERVICE INSTRUCTIONS

INTRODUCTION TO PRESENT MANUAL

This is an INSTALLATION, USE AND MAINTENANCE MANUAL, it discusses the Mechanical Installation of this unit, Start-up Procedures, Operating Sequences and Service Instructions. Read thoroughly the entire manual before starting the unit installation, to get familiarized with all steps and to identify if any additional reference materials are required. The CLIMO units are prewired, pre-charged with R-410A refrigerant and tested at the factory.

INTRODUCTION TO CLIMO

CLIMO is an excellent device that can be used in order to improve the sensation of comfort and customer satisfaction in the outdoor environments, particularly when the outdoor temperature and air relative humidity are very high in spring, summer and autumn season.

To provide cooled and dehumidified air, CLIMO uses a real refrigeration air to air circuit that, compared to traditional adiabatic coolers (that normally increase air humidity), provides a real air conditioned handling of the air.

More specifically it is important to point out that CLIMO, being specifically designed for outdoor use, it can not be compared to traditional indoor air conditioning appliances, because the level of comfort obtainable in indoor ambients (with traditional HVAC appliances) is completely different from the one it is obtainable outside, in open atmosphere conditions, and, in general (when it comes to work in outdoor places) where the performances and the perception of comfort is not always predictable, because it depends on several non-predictable conditions that affect outdoor ambients (wind, sun, clouds, rain, attendance of spaces, etc.).

In particular performances are declared in static air ambient and the perception of outdoor comfort can be even highly negatively influenced by wind and breeze and other several above mentioned non-predictable conditions.

The typical application areas of CLIMO are the outdoor spaces of Private villas, Golf Circles, Yacht Clubs, Holyday Villages, Vacation houses, Lounge bars, Restaurants, Wellness Centers, Fashion places, SPA, Beaches, Swimming pools, Exhibitions and in general all 1st Class Leisure and Wellness structures.


COMPLIANCE

CLIMO units complies with the following European Directives:

- QUALITY STANDARD UNI EN ISO 9001:2008
- LOW VOLTAGE DIRECTIVE 2014/35/EC
- ELECTROMAGNETIC COMPATIBILITY 2014/30/EC
- MACHINERY DIRECTIVE 2006/42/CE

PRELIMINARY SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance or use can cause explosion, fire, electrical shock or other conditions which may cause personal injury or property damage. The producer can not be considered responsible for any kind of damage provided to people and or goods by the unit, any responsibility on those elements are in charge of the owner of the unit.

It is important to recognize safety information. This is the safety-alert symbol 

When you see this symbol on the unit and/or in instructions or manuals, be alert to the potential for personal injury. Understand the signal words DANGER, WARNING, CAUTION, and NOTE.

These words are used with the safety-alert symbol:

- DANGER identifies the most serious hazards which will result in severe personal injury or death;
- WARNING signifies hazards which could result in personal injury or death;
- CAUTION is used to identify unsafe practices, which may result in minor personal injury or product and property damage;
- NOTE is used to highlight suggestions which will result in enhanced installation, reliability or operation.

GENERAL WARNINGS



WARNING: This manual must be kept carefully and made available to the operator for each consultation.



WARNING: The unit must be installed, tested and maintained by qualified personnel and in compliance with legal local requirements.



WARNING: Installation must be carried out in accordance with local safety regulations.



WARNING: Verify that the electrical network characteristics are in accordance with the data on the unit's nameplate.



WARNING: The packaging material must be correctly recycled according to local regulations in force.



WARNING: Disconnect the power supply from the unit before performing any maintenance.



WARNING: Operations must be carried out in accordance with local safety regulations.



WARNING: Perform periodic inspections to identify any parts to be repaired, repaired or replaced.



WARNING: Failure to repair involves the risk of damage to things or people.



WARNING: Turn off the equipment in case of malfunction or in case of weather inclemency.



WARNING: Turn off the equipment and close the CLIMO in case of wind speed superior to 15 km/h.

For any repair, contact an authorized service center only and request the use of original spare parts. Failure to do so may compromise the safety of the equipment. All liability of the manufacturer declares with warranty decay in case of electrical and / or mechanical modifications. Manomissions that are not expressly authorized and do not comply with the contents of this manual will invalidate the warranty.




CAUTION: The unit must only be used for the purpose for which it was expressly designed.


The installer must instruct the user, in particular on:


- switching on and off the unit;
- resting for maintenance;
- what to do and do not do in case of failure.


WARRANTY LIMITATIONS


Warranty is based on the general terms and conditions of the original manufacturer indicated in the data plate on the unit. Any modifications to the design and/or installation made without discussion with the original manufacturer and without advance written agreement will result in the loss of the right to any warranty claims and any claim for injury to personnel as a result of these modifications.

 WARNING
ELECTRIC SHOCK HAZARD
<p>Failure to follow this warning could cause personal injury or death.</p> <p>Before performing service or maintenance operations on unit, always turn off main power switch to unit and install lockout tag. Unit may have more than one power switch.</p>

 CAUTION
CUT HAZARD
<p>Failure to follow this warning could cause personal injury.</p> <p>Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing, safety glasses and gloves when handling parts and servicing air conditioning equipment</p>

 WARNING
UNIT OPERATION AND SAFETY HAZARD
<p>Failure to follow this warning could cause personal injury, death and /or equipment damage.</p> <p>CLIM^o (R-410A) refrigerant systems operate at higher pressures than standard R-22 systems. Do not use R-22 service equipment or components on CLIM^o refrigerant equipment.</p>

 WARNING
PERSONAL SAFETY AND ENVIRONMENTAL HAZARD
<p>Failure to follow this warning could cause personal injury or death damage.</p> <p>Relieve pressure and recover all refrigerant before system repair or final unit disposal. Wear safety glasses and gloves when handling refrigerants. Keep torches and other ignition sources away from refrigerants and oils.</p>

 NOTE
IMPORTANT
<p>Units have high ambient operation limits. If limits are exceeded, the unit will automatically lock the compressor out of operation. Manual reset will be required to restart the compressor.</p>

GENERAL TECHNICAL DATA

Nominal cooling capacity at outdoot ambient temperature 40°C / 60% R.H.			(*)
Cooling Capacity	4550		[W]
Electric Power Input	1320		[W]
EER	3,45		[-]







Nominal cooling capacity at outdoot ambient temperature 50°C / 60% R.H.			(*)
Cooling Capacity	4000		[W]
Electric Power Input	1600		[W]
EER	2,50		[-]

Refrigerant cooling section main characteristics			(*)
Type of evaporator	Copper-Aluminium finned exchanger		
Fan type at evaporator air side	DIDW		
Air flow at the evaporator side (Low Speed - High Speed)	500 - 900		[m3/h]
Type of condenser	Microchannel aluminium exchanger		
Fan type at condensing air side	Axial 5 blades DN450		
Maximum air flow at the condenser side	5000		[m3/h]
Air flow modulation at condenser side	Continuous modulation		

Electric power supply		
Electric alimentation	230 - 50 - 1	[V - Hz - F]

Dimensional and aesthetetic characteristics			(*)
Main base body	White casing in plastic fiber		
Dimensions of the unit in function	Squeread surface covered 3000 x 3000, height 3250		[mm]
Dimensions of the unit NOT in function, with closed Umbrella	Base 700 x 700	height 3250	[mm]
Base foot print (adjustable feets excluded)	Base 700 x 700		[mm]
Total net weight of the unit	190		[kg]
Total gross weight of the unit + wood packaging	350		[kg]

Standard Color (**)		Cod.
	Ecrù	419

Optional Colors (**)		Cod.
	White	358
	Green	468
	Bordeaux	567
	Yellow	396
	Brown	436
	Black	444

(*) Technical data are referred to Cooling Only Version.

(**) In addition to standard color and optional colors, the unit cover can be realized on demand on the closest color the customer need, selecting it from a table of 55 special colors.

UNIT OVERALL DIMENSIONS



NOTE Height Dimension does not include adjustable base feet dimension, because this dimension might change according to the feet heights adjustments needed on the installation place.

INSTALLATION PLACE IDENTIFICATION

Consult local building codes and local regulations for the outdoor installation of general appliances and large size umbrellas.

Determine unit location (from project plans) or select unit location, in accordance to local safety regulations and in a place that is not exposed to wind with speed over 15km/h.



CAUTION: Minimum clearance:

SIDE: 1000mm. This dimension can be reduced to 100mm in case of multiple side by side CLIMO installations.

TOP: 2500mm to assure proper condenser fan operation.

Local codes or jurisdiction regulations may prevail.



CAUTION: Before positioning the unit, check the following:

- The permitted loading at the site is adequate or that appropriate strengthening measures have been taken.
- The unit is installed level on an even surface (maximum tolerance is 5 mm in both axes).
- The number of support points is adequate and that they are in the right places.
- Although the unit can be exposed to light rains for limited periods, guard against water from higher level runoff and overhangs.



WARNING: Do not install unit in an indoor location.

- Do not locate air inlets near exhaust vents or sources of contaminated air.

INSTALLATION SAFETY CONSIDERATIONS

After the unit has been received and when it is ready to be installed, it must be inspected for damage. If damage is detected upon receipt, immediately file a claim with the shipping company and stop any operation of installation.



DANGER: This machine must not be installed in an explosive atmosphere.



CAUTION: During installation, the unit installation place must be in a location that is not accessible to the public and protected against access by non-authorized people, moreover a safety zone of 64 sq meters (in average a surface of 8x8m with the unit in the center of it) must be kept free of any kind of appliances and people not involved in the unit installation.



CAUTION: These units can be moved with a fork lift truck, only when the unit is in horizontal configuration with its original packaging, as long as the forks are positioned in the right place and direction on the unit.



CAUTION: These units are not designed to be lifted from above.

Safety is only guaranteed, if these instructions are carefully followed. If this is not the case, there is a risk of material deterioration and injuries to personnel.



WARNING: Do not remove the skid or the wood packaging box panels until the unit is in its final installation place position.

Once you reach the final position place of installation, you can open the top panels and the lateral panels of the wood box containing the CLIMO unit.

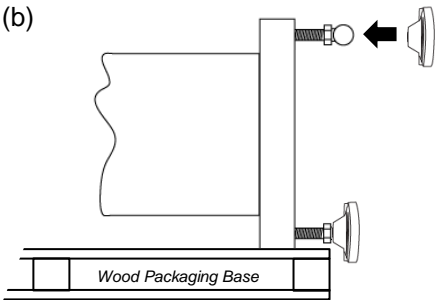
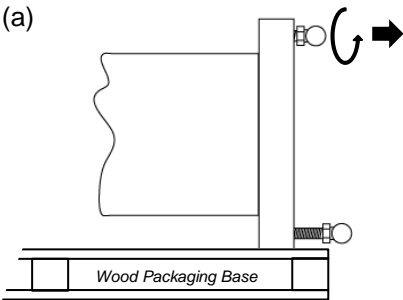


INSTALLATION PROCEDURE

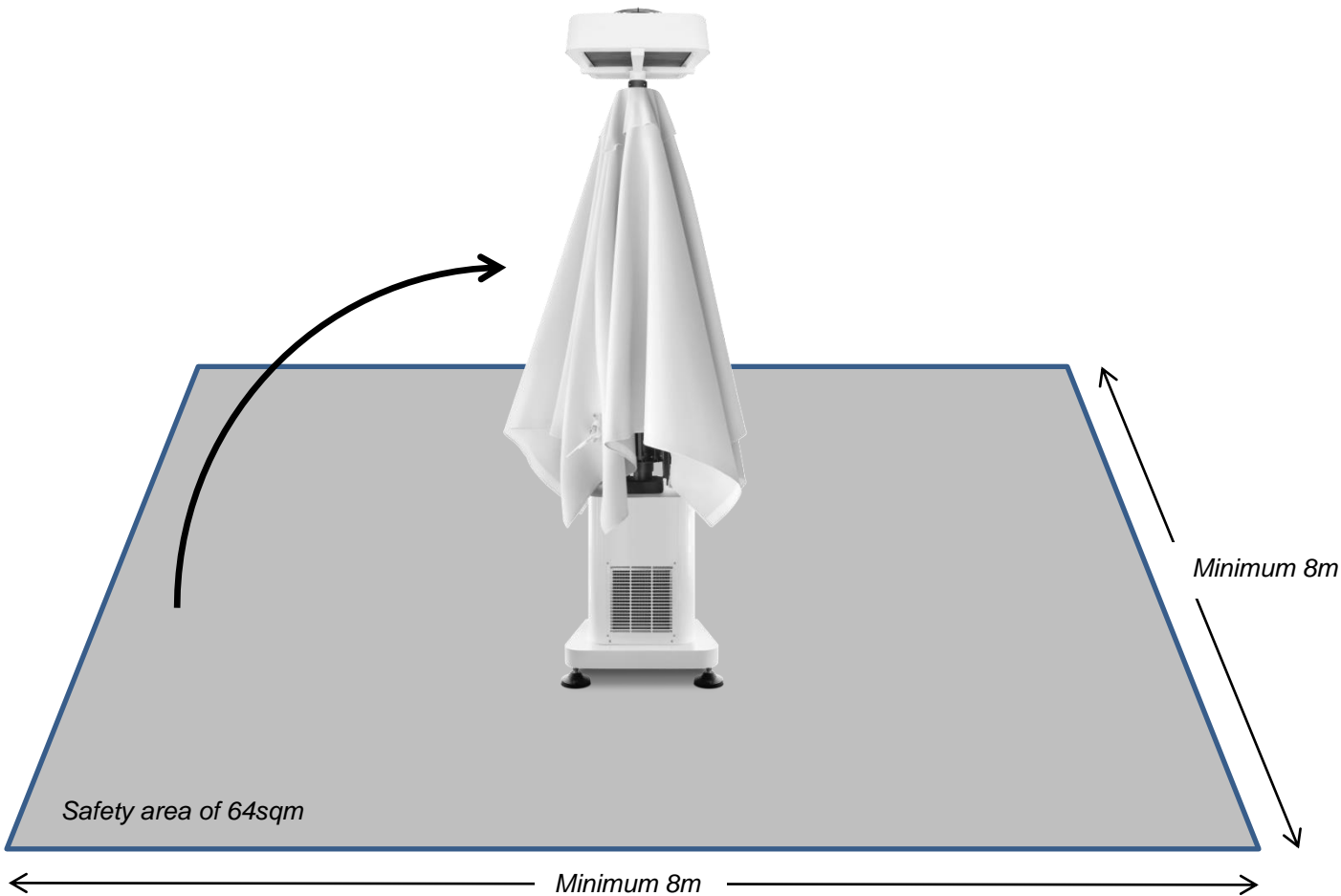
The CLIMO unit is normally shipped in horizontal position and with the 4 adjustable base feet disassembled, for packaging and logistic reasons.



WARNING: Before turning the CLIMO unit in up-right position, it is necessary to (a) unscrew the 4 spherical connections and (b) to secure the 4 adjustable base feet to the 4 spherical connections.



DANGER: The up-right positioning of the unit must be done after an appropriate risk assessment of the operation and after a minimum of 4 workers have been defined and trained, with specific roles and the use of appropriate lifting devices have been selected, in order to put the unit in up-right position, in a safety condition and eliminating all risks of personal injury or product and property damages.



WARNING: The above represented minimum “Safety area of 64sqm” is a surface of minimum 8m long and 8m width that, during installation phases, must be guaranteed not accessible to the public. Moreover the CLIMO must be in the center of this 64sqm Safety area. The whole 64sqm Safety area must be protected against access by non-authorized people and kept free of any kind of appliances and people not involved in the unit installation.
Only trained personnel involved in the installation can stay inside this Safety area of 64sqm.

Once the unit is in up-right position.

Adjust base feet position in order to put the unit in perfect horizontal position on both axes.



CAUTION: after checking that the installation place is the proper one, fix the base feet to the floor with specific heavy duty floor fittings, that can not be removed without using specific tools by maintenance specialized people.
You can use the holes that are present on the feet.



WARNING: The specific kind of fittings to use must be selected by specialized professional designers that can define, after an appropriate risk assessment of the floor material and characteristics, the proper fittings type.
One possible example of heavy duty floor fittings, quite often used in case of floor made by consistent concrete 30cm base is the one showed in the side picture of present text.
These fittings, depending on the floor material and characteristics, are not included in the CLIMO supply and must be provided by the customer.



ELECTRIC CONNECTIONS

FIELD POWER SUPPLY – Unit is factory wired for voltage shown on nameplate.



CAUTION: When installing units, provide disconnect as per NEC (National Electrical Code) requirements, of adequate size. All field wiring must comply with NEC and local requirements. Operating voltage to compressor must be within voltage range indicated on unit nameplate. On 3-phase units, voltages between phases must be balanced within 2% and the current must be balanced within 10%.



CAUTION

UNIT DAMAGE HAZARD

Failure to follow this caution may result in equipment damage.

The correct power phasing is critical in the operation of the scroll compressors. An incorrect phasing will cause the compressor to rotate in the wrong direction. This may lead to premature compressors failure.



WARNING

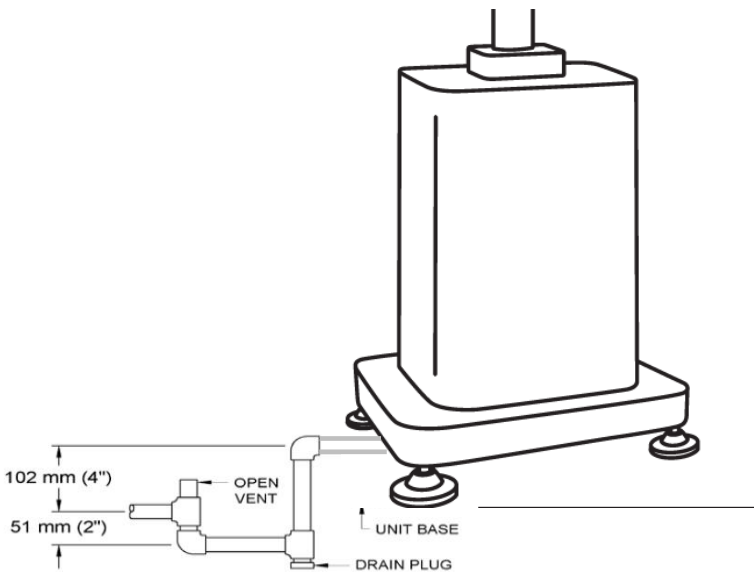
ELECTRIC SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.


Do not use gas piping as an electrical ground. Unit cabinet must have an uninterrupted, unbroken electrical ground to minimize the possibility of personal injury if an electrical fault should occur. This ground may consist of electrical wire connected to unit ground lug in control compartment, or conduit approved for electrical ground when installed in accordance with local electrical codes


TRAP CONDENSATE DRAIN CONNECTIONS


Trap should be deep enough to guarantee the condensate expulsion from the unit. In the below picture it is showed a typical trap sizing.



START-UP PROCEDURE

- 

CAUTION: Check that unit has been installed in accordance with these installation instructions and all applicable codes.
- 

WARNING: Check all electrical connections are tighten as required and check that the electric connections have been designed and realized in accordance to local and international safety electrical regulations.
- 


NOTE: Normally the air diffuser is shipped disassembled from the main body of the unit in order to allow proper secure fixing during shipment.
In this case, before going ahead with the next installation steps, it is important to fix it using the screws available inside the unit packaging.




Opening of the umbrella:

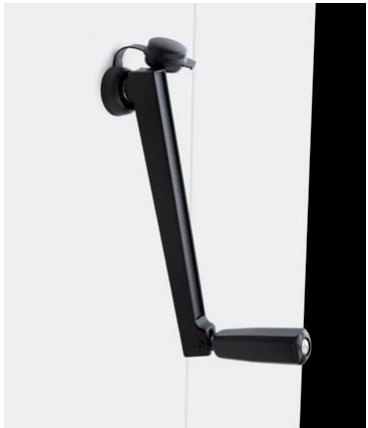
- To open the umbrella introduce the opening device into the side hole, until the connection is not reached.
- Turn the device until the correct opening of the umbrella is reached.



- 

WARNING: It is important to stop immediately acting the opening device, when the side parts of the textile cover reached perfect horizontal position, in order to avoid damages to the structure and the textile cover of CLIMO.
- 

DANGER: Once the use of the opening device is finished, please instruct CLIMO users personnel to put the opening device in a position that can be easily reached and used, by specialized people in case of need of rapid closure of the CLIMO, such as for sudden inclemency of the weather or for excess of wind that might cause problems and damages to the CLIMO, etc.





NOTE: Adjust and set the vertical position of the CLIMO air deflector according to individual pleasure.

Tighten as required, with the specific fixer located below the CLIMO air deflector.



Once finished: remove the opening device from the side hole and close the hole with the specific plastic closure.



OPERATING SEQUENCE

Connect the plug to the electric control panel dedicated to the CLIMO.



WARNING: Check that the electric control panel have been designed and realized in accordance to local and international safety electrical regulations. CLIMO is equipped with a blue/grey security electric alimentation plug, only plugs compatible to this one are allowed.



Switch the unit ON by turning the selector on the ICE icon.
Ventilation will start immediately, while compressor and cooling devices, will start a few minutes after.



Adjust Low or High fan speed according to desired comfort required.



Use USB plug to supply energy to your portable devices.



SERVICE INSTRUCTIONS

CONDENSATE DRAIN — Check and clean each year at start of cooling season.

FILTERS — Clean or replace at start of each cooling season, or more often if operating conditions require.

NOTES

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